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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/002,574      | 11/14/2001  | David E. Branson     | 10003836-1          | 4285             |

7590 11/21/2006  
HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER

LOVELL, LEAH S

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2875

DATE MAILED: 11/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/002,574 | <b>Applicant(s)</b><br>BRANSON ET AL. |  |
|                              | <b>Examiner</b><br>Leah S. Lovell    | <b>Art Unit</b><br>2875               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/14/2001 &amp; 7/8/2002</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities:
  - On page 6, line 3; page 12, line 1; and page 19, line 28, there is a misspelling with the word "flourescent." The correct spelling is "fluorescent" and should replace the three instances of "flourescent."

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Zou et al. (US 6,186,649).

Regarding claim 1, Zou discloses an illumination system for illuminating a scan region on an object, comprising:

a hollow reflector [404] having an interior reflective surface [column 10, lines 27-28] and an exit aperture[408];

a light source [402] positioned within said hollow reflector [figure 12],  
said light source producing a plurality of light rays, some of the light rays

produced by said light source being reflected by the interior reflective surface of said hollow reflector before passing through the exit aperture [column 10, lines 28-31];

a first reflector [420] positioned adjacent a first side of the exit aperture of said hollow reflector [figure 12]; and

a second reflector [422] positioned adjacent a second side of the exit aperture of said hollow reflector [figure 12], said first and second reflectors being positioned in non-parallel [figure 12], spaced apart relation to one another [figure 12], said first and second reflectors at least partially collimating light passing through the exit aperture of said hollow reflector to form a collimated beam [column 10, line 65-67].

In regard to claim 2, Zou discloses said hollow reflector [404] comprising a body having a generally cylindrically shaped interior wall that defines the interior reflective surface [figures 11 and 12] and wherein the exit aperture comprises a generally elongate axial opening in the interior wall of said body [figure 11].

Regarding claim 3, Zou discloses the interior reflective surface of said hollow reflector comprising a diffusing reflecting surface [column 5, lines 47-50].

In regard to claim 4, Zou discloses the interior reflective surface of said hollow reflector is coated with a diffusing reflecting material [figure 3].

Regarding claim 5, Zou discloses said light source comprising a fluorescent lamp [column 5, line 29].

In regard to claim 6, Zou discloses said first reflector comprises a generally planar reflective surface [column 10, lines 43-45].

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Regarding claim 7, Zou discloses said second reflector comprises a generally planar reflective surface [column 10, lines 43-45].

In regard to claim 8, Zou discloses said first and second reflectors comprise specular reflecting surfaces [column 10, lines 61-64].

In regard to claim 9, Zou discloses said first and second reflectors are coated with a specular reflecting material [column 10, lines 61-64].

Regarding claim 10, Zou discloses an illumination system for illuminating a scan region on an object, comprising:

- a body [404] having an interior wall defining a generally cylindrically shaped interior reflective surface [figures 11 and 12], the interior wall of said body also defining a generally elongate axial opening [408] therein located at a first radial position on the interior wall of said body [figure 12];

- a light source [402] positioned within the generally cylindrically shaped interior reflective surface defined by said body [figure 12];

- a first reflector [420] positioned adjacent a first side of the elongate axial opening defined by the interior wall of said body [figure 12]; and

- a second reflector [422] positioned adjacent a second side of the elongate axial opening defined by the interior wall of said body [figure 12], said first and second reflectors being positioned in non-parallel [figure 12], spaced apart relation to one another [figure 12], said first and second reflectors are at least partially collimating light passing through the exit aperture of said hollow reflector to form a collimated beam [column 10, lines 65-67].

Regarding claim 11, Zou discloses said light source comprising a fluorescent lamp [column 5, line 29].

In regard to claim 12, Zou discloses said first reflector comprises a generally planar reflective surface [column 10, lines 43-45].

Regarding claim 13, Zou discloses said second reflector comprises a generally planar reflective surface [column 10, lines 43-45].

In regard to claim 14, Zou discloses the interior reflective surface of said body comprising a diffusing reflecting surface [column 5, lines 47-50].

Regarding claim 15, Zou discloses the interior reflective surface of said body is coated with a diffusing reflecting material [figure 3].

In regard to claim 16, Zou discloses said first and second reflectors comprise specular reflecting surfaces [column 10, lines 61-64].

In regard to claim 17, Zou discloses said first and second reflectors are coated with a specular reflecting material [column 10, lines 61-64].

Regarding claim 18, Zou discloses an illumination system for illuminating a scan region on an object, comprising:

hollow reflector [404] means for defining an interior reflecting surface [figure 12 or 106] and an exit aperture [408];

light source [402] means positioned within said hollow reflector means for producing a plurality of light rays [figure 12]; and

collimating reflector means [416] positioned adjacent the exit aperture defined by said hollow reflector means for at least partially collimating light

exiting the exit aperture defined by said hollow reflector means to form a collimated beam [column 10, lines 65-67].

In regard to claim 19, Zou discloses said collimating reflector [416] means comprises first reflecting means [420] and second reflecting means [422] positioned in generally non-parallel, spaced-apart relation [figure 12].

Regarding claim 20, Zou discloses a method for illuminating a scan region on an object, comprising:

providing a hollow reflector [404] having an interior reflecting surface [figure 12 or 106] and an exit aperture [408];

providing a collimating reflector [416] adjacent the exit aperture of the hollow reflector [figure 12]; and

directing a plurality of light rays onto the interior reflecting surface of the hollow reflector [column 10, lines 28-31], the interior reflecting surface reflecting some of the light rays through the exit aperture in the hollow reflector [column 10, lines 30-34], the collimating reflector at least partially collimating light exiting the exit aperture in the hollow reflector to form a collimated beam [column 10, line 65-67].

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Tant (US 2003/0063461)
- Preston (US 5,921,666)
- Zou et al. (US 6,550,942)

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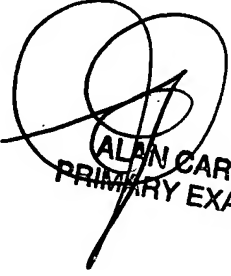
- Wilson et al. (US 6,607,794)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leah S. Lovell whose telephone number is (571) 272-2719. The examiner can normally be reached on Monday through Friday 7:45 a.m. until 4:15 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Renee Luebke can be reached on (571) 272-2009. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Leah Lovell  
Examiner  
15 November 2006



ALAN CARIASO  
PRIMARY EXAMINER